

A11101 887099

NATL INST OF STANDARDS & TECH R.I.C.



A11101887099

/Scientific papers of the Bureau of Stan  
QC1 .U572 V19;469-497;1923-24 C.1 NBS-PU

SCIENTIFIC PAPERS  
OF THE  
BUREAU OF STANDARDS  
—  
VOLUME 19  
NOS. 469-497







DEPARTMENT OF COMMERCE

---

# SCIENTIFIC PAPERS

OF THE

# BUREAU OF STANDARDS

GEORGE K. BURGESS, DIRECTOR

---

VOLUME 19

1923-24



WASHINGTON  
GOVERNMENT PRINTING OFFICE  
1925

Bureau of Standards  
JUL 28 1925

29659

QC

1

665

Cop. 1

Ref.

## CONTENTS OF VOLUME 19

	Page
469. DIRECTIVE RADIO TRANSMISSION ON A WAVE LENGTH OF 10 METERS. <i>Francis W. Dunmore and Francis H. Engel</i>	1
470. A METHOD FOR THE ACCURATE MEASUREMENT OF SHORT-TIME INTERVALS..... <i>Harvey L. Curtis and Robert C. Duncan</i>	17
471. METHODS OF MEASUREMENT OF PROPERTIES OF ELECTRICAL INSULATING MATERIALS..... <i>J. H. Dellinger and J. L. Preston</i>	39
472. ALTERNATING-CURRENT RESISTANCE AND INDUCTANCE OF SINGLE-LAYER COILS..... <i>C. N. Hickman</i>	73
473. A METHOD FOR THE MEASUREMENT OF SOUND INTENSITY... <i>J. C. Karcher</i>	105
474. SERIES IN THE ARC SPECTRUM OF MOLYBDENUM..... <i>C. C. Kiess</i>	113
475. VISIBILITY OF RADIANT ENERGY... <i>K. S. Gibson and E. P. T. Tyndall</i>	131
476. A STUDY OF RADIO SIGNAL FADING. <i>J. H. Dellinger, L. E. Whittemore, and S. Kruse</i>	193
477. SPECTRORADIOMETRIC ANALYSIS OF RADIO SIGNALS..... <i>Chester Snow</i>	231
478. REDETERMINATION OF SECONDARY STANDARDS OF WAVE LENGTH FROM THE NEW INTERNATIONAL IRON ARC. <i>W. F. Meggers, C. C. Kiess, and Keivin Burns</i>	263
479. INTERFEROMETER MEASUREMENTS OF THE LONGER WAVES IN THE IRON ARC SPECTRUM..... <i>W. F. Meggers and C. C. Kiess</i>	273
480. A DIRECTIVE TYPE OF RADIO BEACON AND ITS APPLICATION TO NAVIGATION..... <i>F. H. Engel and F. W. Dunmore</i>	281
481. MEASUREMENT OF LOW RESISTANCE BY MEANS OF THE WHEATSTONE BRIDGE..... <i>Frank Wenner and Alva Smith</i>	297
482. GRAVITATIONAL ANISOTROPY IN CRYSTALS..... <i>Paul R. Heyl</i>	307
483. INVESTIGATION OF THE PLATINUM METALS: IV. DETERMINATION OF IRIDIUM IN PLATINUM ALLOYS BY THE METHOD OF FUSION WITH LEAD. <i>Raleigh Gilchrist</i>	325
484. PREPARATION AND PROPERTIES OF PURE IRON ALLOYS: IV. DETERMINATION OF THE CRITICAL RANGES OF PURE IRON-CARBON ALLOYS BY THE THERMOELECTRIC METHOD..... <i>J. F. T. Berliner</i>	347
485. APPLICATION OF THE INTERFEROMETER TO MEASUREMENTS OF THE THERMAL DILATATION OF CERAMIC MATERIALS..... <i>George E. Merritt</i>	357
486. SOME NEW THERMOELECTRICAL AND ACTINOELECTRICAL PROPERTIES OF MOLYBDENITE..... <i>W. W. Coblenz</i>	375
487. A QUANTITATIVE STUDY OF REGENERATION BY INDUCTIVE FEED BACK. <i>C. B. Jolliffe and Miss J. A. Rodman</i>	419
488. THERMAL EXPANSION OF MOLYBDENUM.... <i>Peter Hidnert and W. B. Gero</i>	429
489. PRIMARY RADIO-FREQUENCY STANDARDIZATION BY USE OF THE CATHODE-RAY OSCILLOGRAPH..... <i>Grace Hazen and Frieda Kenyon</i>	445
490. SPECTRA AND CRITICAL POTENTIALS OF FIFTH GROUP ELEMENTS. <i>Arthur E. Ruark, F. L. Mohler, Paul D. Foote, and R. L. Chenault</i>	463
491. THEORY OF DETERMINATION OF ULTRA-RADIO FREQUENCIES BY STANDING WAVES ON WIRES..... <i>August Hund</i>	487

	Page
492. FORMULAS, TABLES, AND CURVES FOR COMPUTING THE MUTUAL INDUCTANCE OF TWO COAXIAL CIRCLES.. <i>Harvey L. Curtis and C. Matilda Sparks</i>	541
493. ULTRA-VIOLET REFLECTING POWER OF SOME METALS AND SULPHIDES. <i>W. W. Coblenz and C. W. Hughes</i>	577
494. ABERRATIONS OF LONG FOCUS ANASTIGMATIC PHOTOGRAPHIC OBJECTIVES <i>A. H. Bennett</i>	587
495. A RADIOMETRIC INVESTIGATION OF THE GERMICIDAL ACTION OF ULTRA-VIOLET RADIATION..... <i>W. W. Coblenz and H. R. Fulton</i>	641
496. EFFECT OF STRESS ON THE MAGNETIC PROPERTIES OF STEEL WIRE. <i>R. L. Sanford</i>	681
497. THERMAL EXPANSION OF ALUMINUM AND VARIOUS IMPORTANT ALUMINUM ALLOYS ..:..... <i>Peter Hidnert</i>	697







